

Fluorescent Lamp Recycling

► INTRODUCTION

► REGULATIONS

Federal - Environmental Protection Agency Universal Waste Rule
State - Washington Universal Waste Rule for Lamps
Local - King County Waste Acceptance Rule*

► USAGE HISTORY AND EXPERIENCE

► BID AND CONTRACT LANGUAGE

► FOR MORE INFORMATION

► VENDOR INFORMATION



INTRODUCTION

Fluorescent lamps are among the most energy-efficient lighting sources available. They use one-quarter of the energy used by incandescent lamps for the same amount of light and last as much as ten times longer. However, they contain mercury, which is toxic and can accumulate in fish and birds when it is released to the environment. When fluorescent lamps are recycled, the component parts can be separated and any hazardous materials can be managed to avoid such environmental contamination.



REGULATIONS

¹Nationally, about 680 million lamps are disposed of annually, most to solid waste disposal facilities, including landfills and solid waste incinerators. During waste handling and disposal, many lamps break, releasing mercury vapor and potentially exposing waste handlers to inhalation of those vapors. In King County, landfills and transfer stations do not accept any mercury-containing lamps.

Rules from the Federal Environmental Protection Agency (EPA), the Washington State Department of Ecology (DOE), and local government (including King County) affect how businesses dispose of used fluorescent lamps. Fluorescent lamps are considered a "Universal Waste" and businesses are required to recycle or dispose of them through a licensed hazardous waste disposal facility.

Federal - Environmental Protection Agency Universal Waste Rule

EPA states that "universal wastes are usually items commonly thrown into the trash by households and small businesses (such as batteries, thermostats, fluorescent lamps and obsolete agricultural pesticides). Although handlers of universal wastes must meet less stringent standards for storing, transporting, and collecting wastes, the wastes must comply with full hazardous waste requirements for final recycling, treatment, or disposal. This management structure removes these wastes from

¹ http://www.ecy.wa.gov/programs/hwtr/dangermat/universal_waste_lamps.html

municipal landfills and incinerators, which provides stronger safeguards for public health and the environment."

State - Washington Universal Waste Rule for Lamps

Washington Administrative Code: [WAC - 173-303-573 \(5\)](#)

The following types of lamps can be managed as Universal Waste, unless you have information (such as manufacturer material safety sheets) that shows that these lamps are not dangerous waste:

- fluorescent tubes,
- compact fluorescent,
- HID lamps (mercury vapor, metal halide, high-pressure sodium),
- neon lamps; and any other lamps that are dangerous waste.

Local - King County Waste Acceptance Rule*

King County's Waste Acceptance Rules ([PUT 7.1.4](#)) echo the federal and state level rules:

6.16 Fluorescent lights and ballasts are accepted under the following conditions:

Fluorescent lights and other Universal Waste Lamps are not accepted from commercial customers. Call (206) 296-4466 for information on lamp recycling. Recycling is recommended for all commercial and residential lamps containing mercury, including low-mercury lamps that pass the federal TCLP standard. Low-mercury lamps may be accepted at KCSWD facilities when accompanied by a Waste Clearance Decision.

Fluorescent light ballasts that indicate "contains no PCB's" may be disposed at KCSWD facilities. Ballasts without this information must be tested for the presence of PCB's, and are accepted only with a Waste Clearance Decision.

*****Please note that rules in your area may differ, please check your local jurisdiction for more information.***

Local – King County Mercury-Containing Lamp Recycling

King County's policy ([PUT 7-3 \(AEP\)](#)) requires all County facilities to recycle mercury-containing lamps, such as fluorescents, as required by federal and state law.

USAGE HISTORY AND EXPERIENCE

King County businesses and residents are required to recycle products containing mercury, including fluorescent lamps, as they are no longer allowed in the garbage or accepted at transfer stations. King County established a contract for recycling waste lamps, including fluorescent tubes and high-intensity discharge (HID) lamps from its own facilities in 2000. Even though fluorescent lamps contain mercury and require recycling, they are three to four times more energy efficient than incandescent lamps, they last up to ten times longer and reduce greenhouse gas emissions. Responsible recycling reduces the hazard of mercury escaping into the environment. In the past year, King County recycled various lamps, including 40,938 compact, straight and u-tube fluorescent lamps; 2,806 HID lamps and 3,717 pounds of ballasts.

BID AND CONTRACT LANGUAGE

King County now uses the State of Washington contract for these services:

State of Washington Contract #00615 - [Recycling Services-Electronics & Spent Light](#)

[Excerpts of Specifications:](#)

Contractor will provide services for collection, transportation, recycling, and disposal of spent lighting (lamps, tubes, and bulbs) and lighting ballasts. Contractor shall provide a certificate of recycling/disposal for all materials collected. The program's intent is to keep spent lighting out of landfills, manage any dangerous waste and recycle materials as feasible.

Contractor shall have fluorescent lamp recycling equipment capable of separating lamps into glass cullet, aluminum end-caps, and mercury phosphor powder under a continuous vacuum. The lamp recycling equipment shall contain the release of mercury during the recycling process so as to protect employees and the surrounding environment from contamination. Glass cullet and aluminum end-caps are made available to existing markets for those materials. The mercury phosphor powder is shipped to a hazardous waste permitted facility capable of retorting the mercury for reuse.

Non-PCB, TSCA exempt Ballasts from lighting fixtures shall be separated by waste materials and recycled. Ballasts shall contain no Polychlorinated Biphenyls (PCBs) or other dangerous wastes as identified under the Washington State Dangerous Waste Regulations. Ballasts with potting compound shall be managed to handle any dangerous waste, potting compounds are pourable insulating resins used in ballasts and may contain hazardous materials. Purchaser is responsible to direct ballasts with PCBs to state contract no. 03505, Hazardous Waste Handling and Disposal Services to be managed.

Collection services shall include pick-up of spent lighting when Purchaser has a minimum volume of a pallet load, otherwise, the Purchaser shall use the Contractor's Spent Lighting Recycling Kit Program Contractor shall provide Recycling Kits. Bidder shall identify available kit types and corresponding prices in their bid response. Recycling Kits are used to ship spent lighting to the Contractor. Kits shall include the shipping container, shipping labels, shipping and packaging instructions. Shipping cost shall be included in the Kit price, with both the inbound and outbound shipping cost covered by the Contractor, Contractor may deliver and pick-up kits at Purchaser's site(s) or use a courier service. Kits should be able to accommodate various lamp types and quantities of 4' lamps, 8' lamps, U-shaped lamps, CFL bulbs, HID bulbs, incandescent bulbs, etc. Recycling kits shall be designed to economize the shipping cost, by weight, size and materials, while providing safe transport of dangerous waste. Containers shall be clearly marked for contents, hazards and packing instruction.

FOR MORE INFORMATION

King County:

[Take it Back Network Fluorescent Lamp Recycling](#)

[Local Hazardous Waste Management Program](#)

State of Washington:

[Department of Ecology - Universal Waste Rule for Dangerous Waste Lamps WAC 173-303-573\(5\)](#)

Federal:

[Federal Register: Vol. 64, No. 128 / Tuesday, July 6, 1999 / Rules and Regulations](#)

[United States Environmental Protection Agency:](#)

- [Fluorescent Lamp Recycling – 2009; EPA530-R-09-001](#)

[RPN Lighting Guide Summary](#)

Lamprecycle.org

All fluorescent and most high intensity discharge lamps contain a small amount of mercury. Lamprecycle.org is an informational resource online about recycling mercury added lamps. Lamp users must be aware of Federal and state hazardous and universal waste requirements for management of spent lamps. Their goal is to reduce energy, cut down on power plant emissions of mercury and other emissions that contribute to global climate change, acid rain and smog.

VENDOR INFORMATION

King County's Current Contract Vendor:

[Ecolights Northwest](#)

Phone: (888) 214-2327 or (206)343-7443

- King County CPA #5767687(based on [State of Washington contract #00615](#))